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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,828	02/17/2004	Sudhir R. Brahmhatt	22-234	9145

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WILLIAM H. EILBERG
THREE BALA PLAZA
SUITE 501 WEST
BALA CYNWYD, PA 19004

EXAMINER

WARE, DEBORAH K

ART UNIT PAPER NUMBER

1651

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/779,828

Applicant(s)

BRAHMBHATT, SUDHIR R.

Examiner

Deborah K. Ware

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner. *(Applicant is requested to update status of parent case at line 1, page 1 of the specification)*
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/25/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 1, 3-6, and 25-26 are presented for reconsideration on the merits.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on July 25, 2005, was filed after the mailing date of the non-final on March 24, 2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Amendment

The amendment and remarks filed June 10, 2005, have been received and entered. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Arguments

Applicant's arguments filed June 10, 2005, have been fully considered and they are persuasive. The rejection under 35 USC 102 over the previously cited Donofrio (US Patent No. 4, 426,450) has been removed because the reference does not clearly teach a stream of substantially pure oxygen. However, in view of the newly applied art submitted on the enclosed IDS form a new rejection has been prompted but since Applicant has certified that they were not aware of the newly cited disclosures more than 3 months from the filing of the instant IDS the instant action is non-final. Also the examiner has reconsidered the claim language in light of the newly presented scope and determined that there are some additional issues present under 35 USC 112, second paragraph and have set these forth below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-6, and 25-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, and 3-6 are rendered vague and indefinite for failing to recite proper Jepson format for an improvement comprising. It is suggested to change "the improvement wherein" recited at line 6 of claim 1, to --the improvement comprising injecting--and to delete "injected" at line 7. Also it is suggested to delete "is" at line 6, and "and" at line 7, and at line 8 change "comprises" to --is--. Also it is suggested to insert after ",", at line 10, --and--. Further, the recitation of "an oxygen supply" at line 12, lacks antecedent basis. It is suggested to change to --the oxygen supply--. Claims 25 and 26 are also rejected to for being awkward and it is suggested to delete "and" recited at line 6 and insert and end of line 9 in both claims as also suggested for 1 and 3-6 above.

Furthermore, all claims are rejected for the recitation of "substantially pure oxygen" wherein it is unclear what this means in terms of the source of oxygen. How much oxygen is required to be present per se, for which to meet this limitation in the claims? The term is not clearly defined in the instant specification in terms of what is meant by "substantially pure oxygen". No definition has been provided in the instant

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specification. Also the language "the substantially pure oxygen comprises the sole reactive gas, from any source external to the vessel, that is injected into the vessel" is vague with respect to what this means, per se. Does this mean that no air is added or what? Applicant is suggested to present claim language that distinctly sets forth their intended invention in order that appropriate claims may be presented more clearly and distinctly on the record. The metes and bounds of the claims can not be determined.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-6 and 25-26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 0 341 878, newly cited on the enclosed PTO-1449 Form.

Claims drawn to a fermentation process, the improvement comprising injecting a stream of substantially pure oxygen during fermentation process into a fermenter.

EP 0 341 878 teach a fermentation process, the improvement comprising injecting a stream of substantially pure oxygen during fermentation process into a fermenter. See the abstract. The oxygen throughout the culture is dispersed into fine bubbles and oxygenated culture is circulated and returns to the main body of the fermenter, note page 3, lines 42-44. Steps involving agitation, continuous measuring oxygen, and adjustment of flow into the vessel, recycling gas from the head space, and venting gas from the head space outside of the fermenter, are each clearly taught at page 3, lines 1-10, 28-35 and 38-48, page 4, lines 3 and 49, page 5, lines 8-9 and 49. Further, the injecting step can be performed without any blower or compressor and without mixing the oxygen with a liquid.

The claims appear to be identical to the teachings of the cited reference, and are therefore, considered to be anticipated by the reference. Any movement of the stream of substantially pure oxygen through the vessel solely due to pressure of the oxygen supply is inherent to the presence of the gas bubbles as taught by the cited reference. However, in the alternative that there is some difference between the claims and the cited reference then such difference is considered to be so slight as to render the claims obvious in the event that the claims can be interpreted to be different due to some unidentified claimed feature. One of skill would have alternatively been motivated to select for substantially pure oxygen to inject into a fermenter in order to improve a fermentation.

The results of injecting substantially pure oxygen into a fermenter would have been expected to provide successful results for improving a fermentation process. The

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steps of agitation, continuous measuring oxygen, and adjustment of flow into the vessel, recycling gas from the head space, and venting gas from the head space outside of the fermenter, are each clearly taught at page 3, lines 1-10, 28-35 and 38-48, page 4, lines 3 and 49, page 5, lines 8-9 and 49. The reference appears to not disclose a blower or compressor nor does it disclose mixing the oxygen with a liquid. Therefore, in the alternative the claims are at least *prima facie* obvious over the cited reference.

All claims fail to be patentably distinguishable over the state of the art discussed above and cited on the enclosed PTO-892 and/or PTO-1449. Therefore, the claims are properly rejected.

The remaining references listed on the enclosed PTO-892 and/or PTO-1449 are cited to further show the state of the art.

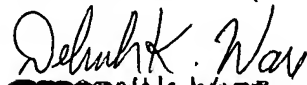
No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah K. Ware whose telephone number is 571-272-0924. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DEBORAH K. WARE
PATENT EXAMINER

Deborah K. Ware
August 20, 2005